Studying Social Networks

A Guide to Empirical Research

von
Marina Hennig, Ulrik Brandes, Jürgen Pfeffer, Ines Mergel

1. Auflage

Studying Social Networks – Hennig / Brandes / Pfeffer / et al.
schnell und portofrei erhältlich bei beck-shop.de DIE FACHBUCHHANDLUNG

Thematische Gliederung:
Empirische Sozialforschung, Statistik

campus Frankfurt am Main 2012

Verlag C.H. Beck im Internet:
www.beck.de
ISBN 978 3 593 39763 4
Relations matter. You knew this, of course - Why else would you be interested in learning about social network analysis? The real questions are: How, where, when, and why do they matter? And, more pragmatically, how can you show that they do?

This book is organized along the process of an empirical study of social networks. It thus provides a guideline and orientation. While we concentrate on the things that are not treated in textbooks on empirical studies of population samples (i.e., non-relational studies), we still think that the book is largely self-contained.

So, what is the subject of a network study?

1.1 The Construction of Social Networks

It has become commonplace to refer to interacting or otherwise dependent entities as networks. The phenomena described as networks range from the social interactions of human beings and the flow of goods between countries to gene regulation and railroad infrastructures. What do these examples have in common that leads us to think we can model and analyze them in similar ways?

Some of the phenomena referred to as networks are real in the sense that their existence does not depend on our perspective. Online social networking services, for example, are technology-enabled products. As such they have well-defined elements. A friending protocol specifies the sequences of actions that yield a link between two user accounts. The immanent meaning of such a link is unambiguous. We may refer to the web of linked accounts as a network or not, in any case, it is represented in the service provider's databases.

However, the social network of human beings who own accounts in the above system is an inferred, construed object. It has no independent existence and is thus always subject to interpretation. In these cases, the use of the term network is that of a model or metaphor; it does not denote an unambiguous object but a perspective.

As a metaphor the term "network" is very graphic, immediately evoking images of points and connecting line segments. Metaphors are very useful for memorization and creative thinking. However, it is not necessarily obvious which aspects of a metaphor correspond to actual properties of that which is represented, and which aspects do not.

Another pitfall of metaphors and models alike is the use of similar representations for weakly related phenomena. By abstracting from the non-essential (with respect to a specific perspective), otherwise invalid commonalities and conclusions may emerge. To illustrate this point, consider (statistical) "distributions" as another example of a representation. If both the distribution of life-expectancy in the east of Austria and the household income in a suburb of Berlin are unimodal
(i.e., have a single peak), does this imply that there is a relation between these two phenomena? We assume that you would not think so, but it appears to be much more tempting to speculate about such relations when two networks exhibit similar features because it is more easily forgotten that they are simplifying and homogenizing, reductionist representations.

The study of social networks is, hence, the study of a particular type of representation in social science contexts (Freeman 1989). Therefore, social networks are constructs and do not exist as such. They are repre- sentations, in which aspects of a social phenomenon - aspects that seem to be relevant in a specific context and for a specific purpose - are expressed in ways more amenable to scientific scrutiny.

Since there are no social networks per se, it is a linguistic simplification when we say that we are studying social networks. In fact we are studying social phenomena by means of network representations. This is carried It appears that the term "social network" was coined in Barnes (1954), in which pre- cisely this image is evoked out by gathering data about aspects of a phenomenon and organizing